Exam/Procedure Light

Service Manual

[redacted]

WelchAllyn®

LS-135 & LS-150 Halogen Exam Lights

Owner's Manual

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LS-135 & LS-150 HALOGEN EXAM LIGHT

Thank you for purchasing your new Halogen Exam Light by Welch Allyn, the worldwide leader in illuminated medical diagnostic instrumentation. By following the use and care guidelines given in this booklet, you will enjoy years of dependable, trouble-free service from your new exam light.

This exam light can be used for topical examinations of the skin such as abrasions, foreign body removal, and other similar applications.

WARNINGS & CAUTIONS:

⚠ **CAUTION**: All users of this exam light should be thoroughly trained in the medical examinations appropriate to the equipment. Furthermore, they should read and understand the instructions contained within this manual before use. Failure to do so may result in injury to the patient or damage to the equipment.

⚠ **CAUTION**: Do not use the LS-135 or LS-150 for transillumination, as erythema may result. Contact Welch Allyn regarding appropriate lights for transillumination applications.

☼ **INTENSE LIGHT**: Lamp is extremely bright. Do not stare at the lamp when in use. May be harmful to eyes.

⚠ **CAUTION**: Remove power cord from electrical outlet and allow lamp to cool 10 minutes before replacing with Welch Allyn lamp. For the LS-135 use lamp No.: 04430 and for the LS-150 use lamp No.: 04450.

⚠ **DANGER**: Electric Shock Hazard - do not disassemble the instrument. Refer servicing to qualified service personnel. There are no user serviceable parts other than the lamp.

⚠ **CAUTION**: Use the examination light in its intended working range of 12 to 36 inches. Exposures at closer distances may be harmful to skin.

DANGER: Risk of explosion if used in the presence of Flammable anesthetics.

IPXØ: Not protected against the ingress of water.

HOT SURFACE: Lamp surface is hot. May be harmful to skin if touched.

Guidelines for the safe use of the LS-135 & LS-150 include:

General good practices to minimize risk of harm to the skin from optical radiation hazards include: minimizing illumination intensity at the tissue examination site, minimizing exposure times, and taking additional precautions when skin sensitivity has been altered through tissue trauma or the use of anesthesia.

General good practices to minimize risk of harm to the eyes from optical radiation hazards include: avoiding looking at bright light sources and their reflections, and protecting eyes where normal pupil sizes and aversion responses are not present.

SWITCH: Switch operation is described as follows:

Off position when rocker switch is oriented towards this marking.

On or full light intensity position.

On or low light intensity position (LS-135 only).

NOTE: This product complies with current required standards for electromagnetic interference and should not interfere with other equipment or be affected by other compliant devices. As a precaution, avoid using this device in close proximity to other equipment.

ASSEMBLY INSTRUCTIONS FOR LS-135 & LS-150

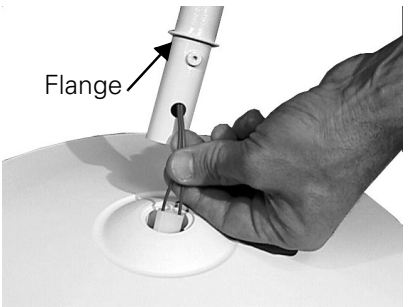
Required tools for assembly: Phillips #2 or #3 screwdriver.

1. Remove all items from the shipping carton. Check for damage or missing components. Refer to photo 1 and table 1. Notify Welch Allyn, or your nearest Service Center of any damage or missing parts using the appropriate phone number listed on page 13.

#1

No.	Description
1	Base Assembly
2	Luminaire-Flexible Arm Assembly
3	Pole Assembly
4	Parts Kit • Base Cover Plate • Screw 1/4-20 x 1" Phillips •1/4" External Lockwasher

2. With the Base Assembly placed on a suitable surface (5' x 2' table or carpeted floor), identify the flange end of the pole. Feed the electrical connector through the center hole of the base, taking care not to pull the twist tie holding the electrical connector at the other end of the pole into the pole. Refer to photo 2.

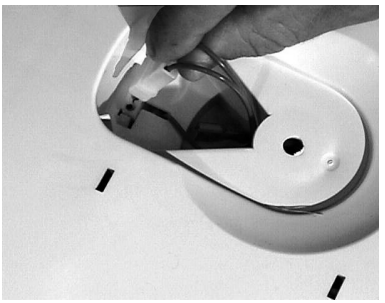


#2

3. Take care to orient the pole tab to base notch. Push pole into base. Refer to photo 3.

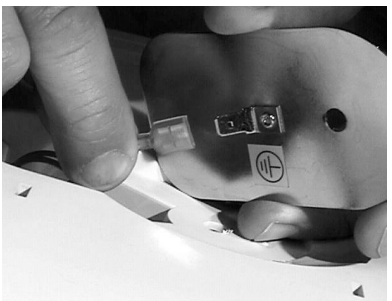
#3

4. Tip the base/pole onto its side and grasp the wire harness white connector. Align the harness connector to the corresponding connector in the base and connect each together by firmly pressing into place. Refer to photo 4.



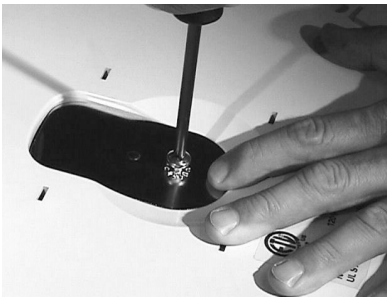
#4

5. From the parts kit, obtain the base cover plate and attach the remaining wire connector to the corresponding tab located on the cover plate. Refer to photo 5.



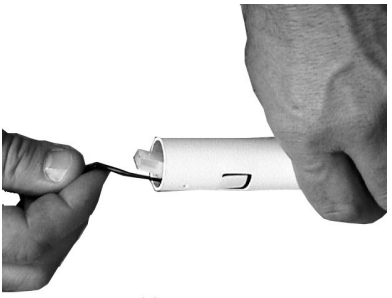
5

6. From the parts kit, obtain the screw and external lockwasher and install through the plate, place the plate into the base, threading screw clockwise into pole. Tighten firmly, using screwdriver. Refer to photo 6.



#6

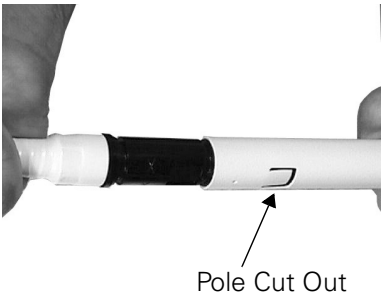
7. With the base/pole still lying on its side, gently pull the electrical connector from inside of the pole using the twist tie. Remove and discard twist tie. Refer to photo 7. Orient the Luminaire-flexible arm assembly's electrical connector to the remaining pole electrical connector and connect each by firmly pressing together. Refer to photo 8.



#7

#8

8. Connect the flexible arm to the pole by lining up the slots on the black plastic connector (nearest the electrical connector) above the pole cut outs. Push flexible arm into pole until it clicks into place. Refer to photo 9.



#9

9. Stand light assembly up onto its base and plug into an appropriate outlet. Please refer to warnings and caution section as well as the operations section prior to use.

OPERATION OF FLEXIBLE ARM

Your new LS-135 & LS-150 light has been carefully designed to give you optimum performance to enable you to easily articulate and place the light exactly where you need it. These design attributes include:

- The lamp has been offset at a 12° angle relative to the Luminaire housing, allowing the physician an unobstructed view of the field of interest.
- A pole to flexible arm joint that allows the flexible arm to be freely rotated about the pole 270°.
- A flexible arm to Luminaire joint that allows rotation of the Luminaire about the flexible arm 300°.
- A 24" flexible arm that allows you to easily articulate and hold the Luminaire in an infinite number of positions.

Please use the following guidelines for proper articulation of the flexible arm:

- The flexible arm should be articulated (bent), NOT TWISTED. Twisting of the flexible arm beyond its rotation stops will decrease the life of the arm and can cause it to lose its ability to hold position.
- Failure of the flexible arm due to twisting may void the warranty.

Special Note: We recommend that you **DO NOT acutely bend** the flexible arm as shown below.

LAMP REPLACEMENT

Disconnect power cord from electrical outlet prior to replacement.

Allow lamp to cool 10 minutes prior to replacement.

1. Exposing the Lamp (Refer to photo 1)

   - Turn power switch to the off (" ") position and unplug power cord from outlet.
   - Rotate Light Assembly Ⓐ so that the lamp points up (towards ceiling).
   - Completely loosen screw in Lamp Housing Ⓑ and lift to expose the Lamp Ⓒ.

2. Freeing the Lamp and Lamp Socket (Refer to photo 2)

   - Release the Lamp Retaining Wire Ⓔ from the Lamp Housing Ⓑ by pushing on wire "ears" towards Lamp Socket and swing out as shown to free the Lamp Ⓒ and Lamp Socket Ⓓ.

3. Removing the Lamp Socket (Refer to photos 3 and 4)

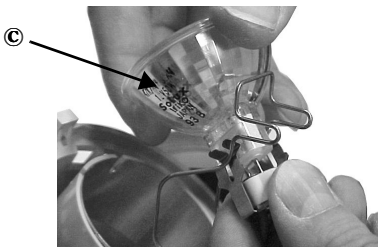
   - Hold the Lamp Ⓒ by its outer rim. Grasp the white sides of the Lamp Socket Ⓓ as shown, pull on the Lamp Socket Ⓓ while rocking it slightly to remove it from the Lamp Ⓒ. Do not pull on Lamp Socket Wires Ⓖ.

4. Install the new Lamp

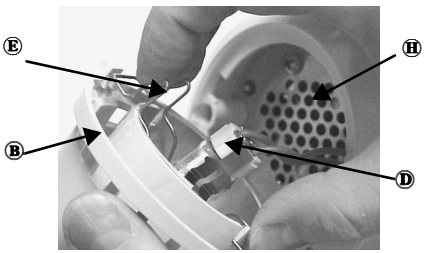
   - Verify that the lamp number located on the metal plate inside the Light Assembly Ⓗ (photo #2) matches the replacement lamp number.
   - Replace Lamp Ⓒ and reattach Lamp Retaining Wire Ⓔ to Lamp Housing Ⓑ.
   - Align Lamp pins to Lamp Socket holes and reconnect Lamp Socket.
   - Reinstall Lamp Housing Ⓑ onto Light Assembly Ⓐ by first engaging Lamp Housing tab (opposite screw) into Light Assembly. Fully tighten screw.
   - Reconnect Power cord and verify Lamp operation.

 # 1

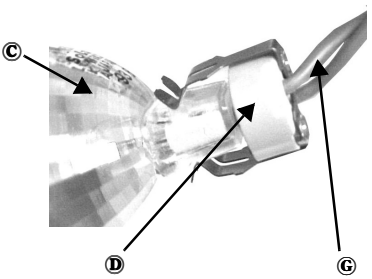
 # 3



 # 2



 # 4



CLEANING

1. Unplug the unit prior to cleaning.
2. The entire unit can be wiped down with a cloth slightly dampened with a mild solution of detergent and water. Wipe the unit dry with a clean, dry cloth. Be careful not to allow moisture to enter into the unit or allow the plug prongs to get wet.
3. Do not plug the light back into the electrical outlet until the light is thoroughly dry.

NOTE: Do not sterilize the unit.

CAUTION: Do not immerse in cleaning solutions

WARRANTY

Welch Allyn will repair or replace, free of charge, any parts of its own manufacture that prove to be defective for reasons other than misuse, neglect, damage in shipment, or normal wear. This warranty is in effect for one year from the original date of purchase.

ORDERING INFORMATION

Catalog #	Description
04450	Halogen replacement lamp for LS-150 Halogen Exam Light
04430	Halogen replacement lamp for LS-135 Halogen Exam Light
44350	Caster base accessory, LS-135 & LS-150 Halogen Exam Light

SPECIFICATIONS

Leakage Current: The products listed within this manual comply with the agency requirements listed below

Environment:

Transport/Storage:
-20°C - 49°C,
10% - 95% R.H. Max,
500hPa - 1060hPa Altitude

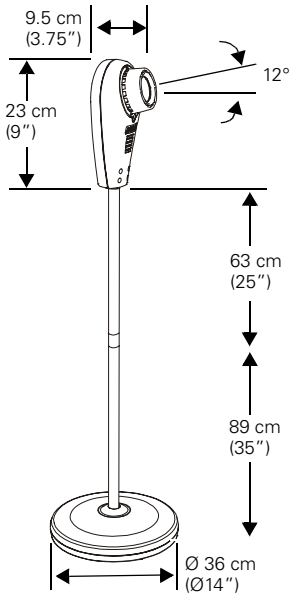
Operating:
10°C - 35°C
30% - 75% R.H. Max,
500hPa - 1060hPa Altitude

Class I Equipment
Continuous Operation

ETL listed:
UL2601-1,
CSA C22.2 No. 601.1,
IEC 60601-1, AS 3200.1.
IEC 60601-1-2

Australia EMC Framework Compliance

N344



Approximate Physical Dimensions

CE

The CE mark on this product indicates that it has been tested to and conforms with the provisions noted within the 89/336/ECC Electromagnetic Compatibility Directive.

Authorized European Representative Address:
European Regulatory Manager
Welch Allyn, LTD.
Kells Road, Navan
County Meath, Republic of Ireland
Telephone: 353-46-79060
Fax: 353-46-27128

Model	Input	Out-put	Fuse (3)	Watt-age	Inten-sity	Spot Size @ 65 cm (24")	Working Distance	Color Temper-ature	Lamp Life	Total Weight	Cord Length
44300	120v~60Hz, 400mA	12v~ 2.9A	250v, 500mA	35w	525fc (1)	29 cm (11.4")	30.5 cm min (12" min) (2)	3000K	5,000 hrs (4)	78 kg (173 lbs)	2.9 M (9.5')
44302	230v~50Hz, 250mA	12v~ 2.9A	250v, 315mA	35w	525fc (1)	29 cm (11.4")	30.5 cm min (12" min) (2)	3000K	5,000 hrs (4)	78 kg (173 lbs)	2.9 M (9.5')
44303	100v~50/ 60Hz, 500mA	12v~ 2.9A	250v, 630mA	35w	525fc (1)	29 cm (11.4")	30.5 cm min (12" min) (2)	3000K	5,000 hrs (4)	78 kg (173 lbs)	2.9 M (9.5')
44304	230/ 240v~50Hz, 250mA	12v~ 2.9A	250v, 315mA	35w	525fc (1)	29 cm (11.4")	30.5 cm min (12" min) (2)	3000K	5,000 hrs (4)	78 kg (173 lbs)	2.9 M (9.5')
44306	240v~50Hz, 250mA	12v~ 2.9A	250v, 315mA	35w	525fc (1)	29 cm (11.4")	30.5 cm min (12" min) (2)	3000K	5,000 hrs (4)	78 kg (173 lbs)	2.9 M (9.5')
44500	120v~60Hz, 600mA	12v~ 4.2A	350v, 800mA	50w	576fc	33 cm (13")	30.5 cm min (12" min) (2)	4700K	3,000 hrs (4)	79 kg (174 lbs)	2.9 M (9.5')
44502	230v~50Hz, 350mA	12v~ 4.2A	250v, 500mA	50w	576fc	33 cm (13")	30.5 cm min (12" min) (2)	4700K	3,000 hrs (4)	79 kg (174 lbs)	2.9 M (9.5')
44503	100v~50/ 60Hz, 750mA	12v~ 4.2A	250v, 1000mA	50w	576fc	33 cm (13")	30.5 cm min (12" min) (2)	4700K	3,000 hrs (4)	79 kg (174 lbs)	2.9 M (9.5')
44504	230/ 240v~50Hz, 350mA	12v~ 4.2A	250v, 500mA	50w	576fc	33 cm (13")	30.5 cm min (12" min) (2)	4700K	3,000 hrs (4)	79 kg (174 lbs)	2.9 M (9.5')
44506	240v~50Hz, 350mA	12v~ 4.2A	250v, 500mA	50w	576fc	33 cm (13")	30.5 cm min (12" min) (2)	4700K	3,000 hrs (4)	79 kg (174 lbs)	2.9 M (9.5')

(1) Full intensity

(2) Recommended minimum working distance, see cautions regarding skin exposure.

(3) Non-user serviceable in-line single acting type.

(4) Lamp life may vary slightly due to usage patterns.

SERVICE INFORMATION

For Technical Support or to obtain return instructions, please contact your nearest Welch Allyn service center listed below:

Welch Allyn, Inc.
4341 State Street Road
Skaneateles Falls, NY 13153-0220
Phone: 1-800-535-6663
Fax: 1-315-685-4653

Welch Allyn, Ltd. - Canada
160 Matheson Blvd. E., Unit #2
Mississauga, Canada L4Z 1V4
Phone: 1-905-890-0004
Fax: 1-905-890-0008

Welch Allyn, Ltd. - UK
Cublington Road
Aston Abbots, Buckinghamshire
England HP22 4ND
Phone: 011-44-1296-689905
Fax: 011-44-1296-682104

Welch Allyn France
814 rue Charles de Gaulle
77100 Mareuil les Meaux
France
Phone: 011-33-1-60-06-33-66
Fax: 011-33-1-60-09-67-97

Welch Allyn, GmbH PSC
Zollerstrasse 2-4
72417 Juningen, Germany
Phone: 011-49-7477-927173
Fax: 011-49-7477-927193

Welch Allyn, LTD - Singapore
300 Beach Road #25-08
The Concourse
Singapore 199589
Phone: 011-65-291-0882
Fax: 011-65-291-5780

Welch Allyn China Service Center
Room 708, 227 Huang Pi Road, North
Central Plaza
Shanghai 200003, China
Phone: 011-86-21-6327-9631
Fax: 011-86-21-6327-9632

Welch Allyn, Ltd. - Australia
Metro Center Unit 5
38 South Street
Rydalmere NSW 2116, Australia
Phone: 011-612-9638-3000
Fax: 011-612-9638-3500

For service in Latin America and the Caribbean region, contact:

MD International
11300 N.W. 41st Street
Miami, FL 33178 USA
Phone: 1-305-669-9003
Fax: 1-305-669-1971

DISASSEMBLY INSTRUCTIONS

If returning a floor stand unit for service, disassemble the flexible arm from the pole to prevent damage.

1. Turn the power switch to the OFF position ( ) and unplug the cord from the outlet.
2. Using a small flat head screwdriver, CAREFULLY pull back the tabs at the top of the pole slightly - just enough to disengage them from the black plastic insert in the pole.
3. Pull up on the bottom end of the flexible arm. Unplug the electrical connector and remove Luminaire-Flexible Arm assembly from the pole.
4. Tilt the pole/base onto its side and unscrew the large phillips head screw located on the bottom center of the base.
5. Remove the metal base cover plate and disconnect the connector attached to it.
6. Disconnect the remaining electrical connector from the base and pull the pole out of the base.
7. Securely wrap the three components (base, pole, and Luminaire assembly) and loose parts in suitable protective packaging) for shipment to your authorized service center.

NOTE: This product contains no materials classified as hazardous. Therefore, its disposal is not deemed as harmful to the the environment or health risk to individuals disposing of the product. As a precaution, it is recommended you contact your local disposal and/or recycling authority for information regarding the disposal of the equipment.

Welch Allyn®

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